

Claims 1-12 and 15-30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nagashima (EP 045088), Sivaramakrishnan (EP 0602595) and Siegele (US 5,607,002) in view of Lankford (The Making Shaping and Treating of Steel) or Maruhashi (4,594,114).

Claims 13 and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nagashima (EP 045088), Sivaramakrishnan (EP 0602595) and Siegele (US 5,607,002) in view of Lankford (The Making Shaping and Treating of Steel) or Maruhashi (4,594,114), taken in further view of Yamaguchi (US 5,520,858) and Stauffer (US 5,252,134).

As amended, all the pending claims of the subject application comply with all requirements of 35 U.S.C. Accordingly, Applicant requests examination and allowance of all pending claims.

Formal Matters

Claim 46 has been amended to correct a minor inadvertent typographical error. The applicants submit that no new matter has been entered with these amendments.

The Rejection Under 35 U.S.C. 103(a)

Claims 1-12 and 15-20

The applicants respectfully traverse the rejection of claims 1-12 and 15-30. In rejecting these claims, the Examiner states that the Nagashima, Sivaramakrishnan and Siegele references all teach the use of stainless steel in semiconductor processing equipment of the type contemplated by the applicants. The Examiner further states that Lankford and Maruhashi teach that stainless steel having little or no nickel is common and a well known corrosion resistant material. The Examiner argues, therefore, that it would have been prima facie obvious to use a low nickel stainless steel in the apparatus of Nagashima, Sivaramakrishnan or Siegele, in the absence of a showing of unexpected results commensurate in scope with the claims.

The applicant submits that the Examiner has not established a prima facie case of obviousness since obviousness cannot be established absent some teaching, suggestion or incentive supporting the combination (ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F. 2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)). Specifically, neither Lankford nor

Maruhashi teaches or suggests that it is advantageous to use a stainless steel with a low nickel content in an apparatus for use with liquid phosphorous such as that taught by Nagashima, Sivaramakrishnan or Siegele. Absent such a showing in the prior art, the Examiner has impermissibly used the applicants teaching to hunt through the prior art for the claimed elements and combine them as claimed (see *In re Vaeck*, 947 F. 2d 488, 20 USPQ 2d 1438 (Fed. Cir. 1991); *In re Bond*, 910 F. 2d 831, 15 USPQ 2d 1566 (Fed. Cir. 1990); *In re Laskowski*, 871 F. 2d 115, 117, 10 USPQ 2d 1397, 1398 (Fed. Cir. 1989)). The use of hindsight is never permissible to establish obviousness.

Furthermore, none of the references cited in the rejection teach or suggest the problem solved by the invention or its source. Specifically, none of the references cited in the above rejection teaches the effect of Nickel on a liquid phosphorous precursor. As such, none of the cited references makes the suggestion that the reducing the nickel content of a stainless steel used in an apparatus for handling such a precursor will have any beneficial effect. By contrast, the applicants have discovered that a low nickel content in the stainless steel used in the apparatus of the present invention reduces the build-up of residue. (see page 5, lines 4-20 of the specification). Thus, the Examiner has failed to establish a prima facie case of obviousness since a patentable invention may lie in the discovery of a problem even though the remedy may be obvious once the source of the problem is identified (see *in re Peehs*, 612 F.2d at 1290, 204 USPQ at 837 (CCPA 1980)).

In addition, Maruhashi teaches that a corrosion resistant stainless steel with a higher content of phosphorous than that of existing stainless steels(see col. 1, lines 28-45). As such Maruhashi teaches away from the invention as recited in claims 1-30.

Therefore, the applicant submits that independent claims 1, 8, 20, 26 and 28 are not obvious over Nagashima, Sivaramakrishnan or Siegele in view of Lankford or Maruhashi and are patentable under 35 U.S.C. § 103. Furthermore, dependent claims 2-7, 9-19, 27, and 29-30 depend, either directly or indirectly from claims 1, 8, 20, 26 and 28 and recite additional features therefor. As such, and for the exact same reasons recited hereinabove, the applicants submit that these dependent claims define an invention suitable for patent protection.

Claims 13 and 14

The applicants respectfully traverse the rejection of claims 13 and 14. In rejecting these claims, the Examiner cited the reasons stated hereinabove with respect to claims 1-12 and 15-30. In addition the Examiner argues that Yamaguchi and Stauffer disclose gas bubblers and boilers for deliver reaction gases to a semiconductor processing apparatus. The Examiner concludes that it would have been prima facie obvious to use low nickel stainless steel as a material of construction for these apparatus also.

As stated hereinabove with respect to claims 1-12 and 15-30, the applicants submit that the Examiner has not established a prima facie case of obviousness since obviousness cannot be established absent some teaching, suggestion or incentive supporting the combination. Specifically no combination of Nagashima, Sivaramakrishnan, Siegle Lankford nor Maruhashi with Yamaguchi and/or Stauffer teaches or suggests that it is advantageous to use a stainless steel with a low nickel content in an apparatus for use with Liquid phosphorous. Absent such a showing in the prior art, the Examiner has impermissibly used the applicants teaching to hunt through the prior art for the claimed elements and combine them as claimed. The use of hindsight is never permissible to establish obviousness.

Furthermore, none of the references cited in the rejection teaches or suggests the problem solved by the invention or its source. Specifically, no combination of the references cited in the above rejection teaches or suggests the effect of Nickel on a liquid phosphorous precursor. By contrast, the applicants have discovered that a low nickel content in the stainless steel used in the apparatus of the present invention reduces the build-up of residue. Thus, the Examiner has failed to establish a prima facie case of obviousness since a patentable invention may lie in the discovery of a problem even though the remedy may be obvious once the source of the problem is identified (see in re Peehs, above).

In addition, Maruhashi teaches a corrosion resistant stainless steel with a higher content of phosphorous than existing stainless steels (see col. 1, lines 28-45). As such Maruhashi teaches away from the invention as recited in claims 13 and 14.

Therefore, the applicant submits that claims 13 and 14 are not obvious over the prior art of record and are patentable under 35 U.S.C. § 103.

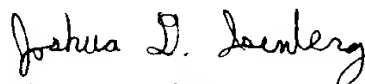
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CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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